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should be used, as the corolla is gamopetalous nearly to the middle. The corolla-appendages are lacerate-toothed rather than " bearded." The mature stamens are more than " half the length of the corolla exclusive of its appendages." The appendages of the petals appear to elongate considerably during the opening of the bud, and they are widely explanate when the flower is expanded, becoming early detached. They appear to act as pollen-holders. Their mode of origin is peculiar. They are not continuous with the tips of the petals, but originate from the inner face of the latter.

Explanation of Plate 294.

Fig. 1. Flowering branch, slightly reduced.
Fig. 2. A bud.
Fig. 3. Longitudinal section of bud, showing concave lateral face of theca.
Fig. 4. Anther, showing attachment of connective.
Fig. 5. A petal with its appendage.

Some new Fungi, chiefly from Alabama.

By Lucien Marcus Underwood.

In certain favorable seasons the Southern States offer fine opportunities for field work in mycology. It is fortunate that we are beginning to have intelligent field workers that are resident instead of transient collectors, for it is only by persistent resident work that anything like a clear understanding of the flora can be obtained. While much is still to be desired in many of the Southern States, it can safely be said that the States of Alabama and Mississippi, at least, are now fairly well equipped with local workers, as compared with neighboring States, if one or two workers for an area of 50,000 square miles can be regarded as a fair equipment. Many species are comparatively ephemeral, and only the local observer who is at hand at the favorable moment is able to gather the harvest. The fall season of 1895 was specially unfavorable for field work, on account of excessive drought, and this condition prevailed more or less throughout the spring season. In fact, not until July, 1896, were the rains sufficient to bring out the normal hymenomycetous flora. Since that time, and particularly during the months of October, November and December, 1896, Professor Earle reports a very prolific growth of fleshy species, and among them he sent a very interesting series of the central and lateral stemmed forms of the genera *Polyporus*. These, together with a few others collected by myself in the same region, and one or two from elsewhere, are described below. For convenience the genera and species are arranged alphabetically.

HYDNUM CHRYSOCOMUM n. sp.

Resupinate, forming areas 2–6 cm. each way; mycelial strands wide-creeping, more or less branched, bright orange-yellow, expanding here and there to form a membranous subiculum bearing the bright orange-yellow spines; subiculum thin, whitish fimbriate at the margin, yellowish within and later bright orange-yellow; spines crowded, 1 mm. or more long, often confluent so as to appear flattened, terete when single, concolorous, rather obtuse.

Growing under much decayed sticks, New Dorp, Staten Island, New York, October 17, 1896. Smaller and imperfect specimens had been previously found in Indiana and Alabama, with well-developed mycelium and scanty spines. A well-marked species and easily recognized by its brilliant mycelial strands and the color of its spines.

LEPIOTA MAMMAEFORMIS n. sp.

Pileus thin, white, with a dull brownish strongly umbonate disc, 5-8 cm. in diameter, mealy squamulose, the margin strongly sulcate-striate, somewhat incurved; gills rather narrow, moderately close; stem 12-18 cm. long, flexuous, hollow, tapering upward from an elongate thickened base, over 1 cm. at its greatest thickness, the narrow distant annulus often finally deciduous.

Growing caespitosely from near the base of a decaying *Broussinetia* on the streets of Auburn, Alabama, July 1896. The gills turn darker in drying and the umbo becomes strikingly prominent.

LEPTOGLOSSUM ALABAMENSE n. sp.

Black throughout, gregarious, 2–3 cm. high. Ascoma about 1 cm. long, flattened, in the dry condition about 2 mm. wide and 0.5 mm. thick, blunt or rounded, horny, yellowish within; stem roughened, somewhat enlarged at base; spores hyaline, straight or slightly more or less curved, biseriate in the asci, becoming 4-septate, 18–20 x 4 μ; paraphyses abundant, thickened and darker colored at the tip.

On the ground, Auburn, Alabama. July.

PERONOSPORA PLANTAGINIS n. sp.

Mycelium parasitic in well-defined yellow areas of the leaf, occupying the entire width and a length of 1–3 cm.; conidiophores usually solitary, long exserted, irregularly 5–6 times dichotomous; ultimate ramulae short, unequal, recurved, 4–12 μ long; conidia narrowly oval or lemon-shaped, pointed at each end, dark, almost black by reflected light, brownish violet by transmitted light, 40–44 x 16–18 μ. Oöspore unknown.

On leaves of *Plantago aristata*, Auburn, Alabama, May, 1896. F. S. Earle.

PERONOSPORA SEYMOURII Burrill n. sp.

Sparse, forming white patches or lines on leaves and stems; oöspores on floral organs. Mycelium large, distorted, haustoria knob-like; conidiophores slender, seven or eight times dichotomous, branches flexuous, spreading, tips short or of moderate length, subulate; conidia subglobose to elliptical, variable, 12–18 μ by 14–27 μ, brownish; oögonia with firm, rather thick brownish walls, reaching 70 μ in diameter; oöspores dark brown, opaque, thick-walled, rough, 27–45 μ.

On *Houstonia* sp. Union and Jackson counties, Illinois, April 11–28, 1882. (A. B. Seymour.)

The above description was furnished me by Professor T. J. Burrill. Having found what appeared to be an undescribed species of *Peronospora* on *Houstonia patens*, in Auburn, Alabama, I learned by accident that a species had been found on the same host many years ago and that its description written at the time by Mr. Seymour had laid in manuscript until now. The Alabama specimens appear to be the same species, but no oöspores were found. In the Alabama specimens the conidiophores were about 400 μ long, with a diameter of about 6 μ; the branching was alternate, the main branches being 70–90 μ long and the ultimate branches or sterigmata 6–10 μ; the conidia were more often ovate, 21 by 11–14 μ.

POLYPORUS DECURRENS n. sp.

Mesopous; terrestrial; pileus nearly circular, 5 cm. in diameter, plane or slightly depressed at the centre, brown or bay-colored, covered with a thin crust which is glabrous except where it is raised at certain points to simulate, when dried, an imbricated surface; pores nearly white, forming a layer about 2 mm. deep, decurrent on the stem and vanishing in faint reticulations just above the base, slightly angular, 0.5 mm. in diameter; dissepiments thin, entire; context white, probably fleshy when fresh, compact, homogeneous, about 7 mm. thick at the centre, gradually becoming thinner; margins thin, slightly involute when dry; stem somewhat bulbous at base, 3 cm. or more long, tapering above, 1 cm. in diameter at the apex, 1.5 cm. below, somewhat darker than the pores.

Growing in soil on the side of a cañon near the Soldier's Home, near Los Angeles, California. Feburary, 1896. Dr. H. E. Hasse. (Communicated by A. J. McClatchie.)

A very characteristic species; the pileus in drying presents a very irregular surface, certain points which have the appearance of slight imbrications remaining more elevated, while the intermediate spaces become deeply depressed; it is hoped that more material can be secured of this interesting plant and that its characters may be noted in the field. The measurements were made from the dry specimen and are naturally somewhat less than in the fresh condition.

POLYPORUS EARLEI n. sp.

Mesopous; terrestrial; stem 4–5 cm. long, 1–1.5 cm. or more thick, colored like the pileus; pileus 7–12 cm. each way, cinereous, slightly darker towards the centre; margin very thin, much incurved in drying; context soft-fleshy, grayish, drying to a thin layer; pores 1–2 mm. deep, somewhat whitish-stuffed when young, cinereous gray, paler when young and, towards the margin, small (less than 0.5 mm.), the dissepiments rather firm, entire.

Pine woods, Auburn, Alabama, Nov., 1896. Prof. F. S. Earle.

The plant is cinereous throughout and retains this color when dry. It gives me great pleasure to associate with this plant, the name of my former genial co-laborer and companion in many "fungus forays," who is contributing largely to our knowledge of mycology in a much neglected section of the Union.

POLYPORUS FLAVO-SQUAMOSUS n. sp.

Pleuropous; terrestrial; stem 7–8 cm. long, 4–5 cm. thick, slightly flattened, irregularly roughened, colored like the pileus; pileus 15 cm. each way, yellowish, with a slight tinge of greenish; covered with rather small floccose imbricate scales, which form a very thin fragile crust, channeled behind where the edges nearly meet; margin rather acute, more or less incurved in drying; context white or slightly yellowish, fleshy, firm, becoming almost woody when dry; pores 5 mm. deep, rather large (about 1 mm.), irregular, angular, with thin dissepiments, slightly decurrent, white, changing to greenish where wounded, yellowish when dry; spores oval or ovoid, 9 x 6 μ, with a single large highly refractive gutta.

Growing in clayey soil, Auburn, Alabama, 23 Nov., 1896. Mrs. F. S. Earle.

POLYPORUS IRREGULARIS n. sp.

Pileus irregular, more or less branching, brownish, paler towards the margin, uneven, subtomentose, with a thin imperfect crust, the under layer of which is darker colored, forming a delicate brown line in section; 4–6 cm. long, 3–4 cm. wide, the margin usually thin; context white, floccose-felty pores white, 5 mm. or more deep, irregular, more or less angular, small (0.25 mm.), the dissepiments rather thin, firm, even.

Growing irregularly underneath a pine log, Auburn, Alabama, Feb., 1896.

The older portions are ferruginous brown above, and the free margins, when developed, are thin and distinctly paler brown for a space of about 1 cm. The extreme margin is sterile, and the pores which are normally even, become irregular and oblique as the margin tends to become erect.

POLYPORUS MELIAE n. sp.

Pileus convex, dirty white, subtomentose, anoderm, 5–8 cm. in diameter, occasionally coalescing; margin obtuse, sometimes extending nearly or quite around the pores; cortex floccose-corky, whitish; pores cream white, becoming darker with age, more or less rimose, 5–6 mm. deep, minute (about 0.2 mm.), the dissepiments firm, slightly uneven, usually with obtuse edges; spores narrowly oblong, 6x3, hyaline.

On branches of *Melia Azederach*, Auburn, Alabama, Oct., 1895.

In very old specimens the layer of pores becomes cracked in all directions and very much discolored.

POLYPORUS RETIPES n. sp.

Terrestrial; stem excentric, 4–6 cm. long, 2 cm or more thick, yellowish-white towards the base; pileus 6–15 cm. each way, brown, appressed tomentose, finely areolate-rimose so as to appear finely mottled; context fleshy, rather thick (2 cm. or more) becoming quite thin in drying, whitish; margin acute; pores decurrent half the length of the stem, shallow, whitish, large (1.5 mm. or more), mostly hexagonal, the dissepiments thin and finely lacerate.

The young pores are very shallow and the stem appears reticulate-veined nearly to the base. As the pores become older they deepen and those nearest the base of the stem become more or less obscured.

In pine woods, Auburn, Alabama, Dec., 1896. Mrs. F. S. Earle.

PUCCINIA POLYSORA n. sp.

II., III. Amphigenous; sori very small, short, very numerous but irregularly scattered, remaining long enclosed in the tough epidermis of the host, at length rupturing by a narrow slit; uredospores large, broadly oval, $35 \times 30\ \mu$, scarcely echinulate, the epispore of medium thickness, pale rusty brown; teleutospores variable, usually short, irregularly oblong, often somewhat constricted at the septum, averaging $25 \times 40\ \mu$, the cells often irregularly angled, the upper usually broader than long, blunt or rounded above; apex not thickened; pedicel usually short.

On *Tripsacum dactyloides*, Auburn, Alabama, August and October, 1891, B. M. Duggar.

USTILAGO SPARSA n. sp.

Parasite infesting occasional ovaries and transforming them into somewhat sphaerical olivaceous pustules covered by the changed and roughened seed coat, 1–3 mm. in diameter, the remainder of the inflorescence unchanged; spores regularly oval, distinctly echinulate, about 7–9 μ in length.

Related to *U. neglecta* Niessl. and *U. spermophora* B. & C., but distinguished from them by its larger pustules and smaller spores. It has nothing in common with *U. Dactyloctaenii* P. Henn. Die Pflanzenwelt Ost-Afrika, 5 : 48 which occurs on the same host, has dark violet horn-shaped sori and smooth spores, 10–14 μ.

In scattered ovaries of *Dactyloctenium Aegyptium*, Auburn, Alabama, November, 1895, and October, 1896. Underwood & Earle.

February 8, 1897.

An undescribed Lechea from Maine.

By Eugene P. Bicknell.

One of the most characteristic plants of York Harbor, Maine, is a species of *Lechea* which abounds in dry open places, especially